



1. A flywheel assembly for a power transmission system for transmitting engine torque [to a driven unit], comprising:

5 an elastic plate secured to a crankshaft to rotate therewith;

a flywheel body secured to said elastic plate and having an engaging [engageable] surface for engaging with a clutch disc; and

10 a reinforcing member for reinforcing said elastic plate at a portion of said elastic plate which is secured to said crankshaft;

15 said elastic plate having an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel assembly [to said driven unit] while decreasing noise produced by a bending vibration of said crankshaft;

20 wherein each of said elastic plate, said flywheel body and said reinforcing member comprises a first portion, said first portion of said flywheel body being placed axially between said first portions of said elastic plate and said reinforcing member, and said first portions of said elastic plate, said flywheel body and said reinforcing member defining clearances for allowing said first portion of said flywheel body to move axially between said first portions of said elastic plate and said reinforcing member.

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2. A flywheel assembly as set forth in claim 1, wherein said axial rigidity is in the range of 600 kg/mm to 1700 kg/mm.

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3. A flywheel assembly as set forth in claim 2, wherein an axial run-out of said engaging [engageable] surface when rotated by said crankshaft is no more than 0.1 mm.

4. A flywheel assembly according to claim 1, wherein
said reinforcing member (4) and said elastic plate (2) are
fastened to said crankshaft (1) by a fastening means (3), and
said elastic plate is clamped between said crankshaft and said
reinforcing member.

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5. A flywheel assembly according to claim 4, wherein
said elastic plate is circular and comprises an outer peripheral
portion (2b) surrounding said first portion of said elastic plate,
so that said first portion of said elastic plate is an inner portion
of said elastic plate, said flywheel body comprises an outer
peripheral portion (5a) which surrounds said first portion of
said flywheel body, so that said first portion of said flywheel
body is an inner portion of said flywheel body, said outer
peripheral portions of said elastic plate and said flywheel body
are fastened together by a second fastening means (6), said
inner portion of said flywheel body comprises an inwardly
facing inside cylindrical surface defining a central circular hole
(5b), said reinforcing member comprises a cylindrical portion
(4a) which is received in said circular hole (5b) of said
flywheel body, and comprises an outwardly facing outside
cylindrical surface surrounded by said inwardly facing
cylindrical surface of said flywheel body, said first portion of
said reinforcing member is in the form of an outward flange
(4b), said first portion of said flywheel body is [slidably]
mounted on said cylindrical portion of said reinforcing member
[so that], and said cylindrical portion of said reinforcing
member is sized to allow said first portion of said flywheel
body [is] to slide axially [slidable] between said inner portion
of said elastic plate and said outward flange of said reinforcing
member.

6. A flywheel assembly according to claim 4, wherein
said inner portion of said flywheel body comprises a first
surface (5f) which is substantially parallel to said engaging
[engageable] surface (5g) and which faces toward said elastic
plate, and a second surface (5d) which is substantially parallel
5 to said engaging [engageable] surface and which faces toward
said outward flange of said reinforcing member, said inner
portion of said elastic plate comprising an abutting surface
confronting said first surface of said flywheel body and
limiting an axial movement of said inner portion of said
10 flywheel body [elastic plate] by abutting against said first
surface of said flywheel body, said outward flange of said
reinforcing member comprises an abutting surface confronting
said second surface of said flywheel body and limiting the axial
movement of said inner portion of said flywheel body by
abutting against said second surface of said flywheel body, an
15 axial distance between said first and second surfaces of said
flywheel body is smaller than an axial distance between said
abutting surfaces of said elastic member and said reinforcing
member.

7. A flywheel assembly according to claim 6, wherein
said second surface (5d) of said inner portion of said flywheel
body is located axially between said first surface (5f) and said
25 — engaging [engageable] surface (5g) of said flywheel body.

8. A flywheel assembly for a power transmission
system for transmitting engine torque [to a driven unit],
comprising:

30 an elastic plate secured to a crankshaft to rotate
therewith;
a flywheel body secured to said elastic plate and having
an engaging [engageable] surface for engaging with a clutch